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The hydrogen bond in dithioacids of pentavalent phosphorus - Communication 2. Intermolecular h-bonds and the conformation of molecules of dithioacids

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Abstract

1. The IR spectra of a number of phosphinic, phosphonic, and phosphoric dithioacids and their solutions in CCl4 were studied in the region of the valence vibrations of the SH group. 2. Molecules of dithioacids in dilute solutions exist primarily in conformations with an intramolecular hydrogen bond SH...S=P. 3. In the investigated compounds associates are formed through a H-bond of the sulfhydryl group with the thiophosphoryl group and the oxygen of the substituent (in the case of phosphonic and phosphoric dithioacids). 4. The spectral characteristics of the H-complexes formed were determined, and the enthalpies of formation of hydrogen bonds were calculated. © 1973 Consultants Bureau.

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